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**From:** Fujioka, Heather  
**To:** Scheibe, Mark; Wellander, Chris A.  
**Sent:** 6/18/2007 1:13:15 PM  
**Subject:** FW: Analysis of Ala Moana On-Board Survey Records

Jim's analysis of the on-board survey.....

<<thebusdata\_186.xls>>

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**From:** James.Ryan@dot.gov [mailto:James.Ryan@dot.gov]  
**Sent:** Monday, June 18, 2007 11:03 AM  
**To:** Fujioka, Heather  
**Cc:** Davidson, William A.  
**Subject:** RE: Analysis of Ala Moana On-Board Survey Records

Attached is an Excel file that has some more exploration of the Ala Moana Center question. On the first worksheet, I extracted from the full dataset those records that had zone 186 as either the origin or the destination. On the second worksheet, I flagged the bus routes that connect directly to Ala Moana Center – either “atAMC” for routes on Ala Moana Blvd. or Kona Street, or “nrAMC” for routes on Kapiolani. Then I added four columns to the 186-related records (highlighted in yellow): AMC1 through AMC4. The values in these four columns are 1 if the corresponding route in bus1 through bus4 connects to or near AMC and 0 otherwise. The fifth added (and shaded) column uses another lookup table on the second worksheet to flag the records that may have a problem. A -1 indicates that none of the listed routes connects at or near AMC, so an AMC origin or destination might be hard to reach. A 1 indicates that more than one of the routes in bus1 through bus 4 connects to AMC, so the reported path might have included a transfer at AMC rather than the true origin or destination.

Some of the records getting a 1 flag seem to include multiple routes that the traveler could use for the trip. For example, sampn 63038 is a trip to AMC that reports buses C, 40, and 93. But all three routes connect the Waianae coast with downtown (C and 40 both go to AMC, while 93 goes to the government center or thereabouts). So I'd guess the traveler was attempting to report the three different buses that he/she could take, perhaps depending on which one arrived first at the origin-end bus stop.

Anyway, the analysis shows that about 20 percent of the zone-186 records have an error of type -1, and about 19 percent have an error of type 1. That leaves only 60 percent of the records that pass this test without further exploration. Besides the general principle that the word “data” should always appear in quotes, these results might highlight some need for further error-checking before we conclude that Ala Moana Center has boomed in terms of the generation of transit trips. I've probably made some mistakes in assigning AMC flags; and the reporting of alternative buses (rather than sequential buses) clearly contributes to the type 1 error (and to the average transfer rate “reported” in the survey) but I think you should be aware of these initial results.

I know that you are wrapping up efforts under the AA contract, but you might keep this in mind for pursuit during upcoming work on the fixed-guideway project.

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**From:** Fujioka, Heather [mailto:Fujioka@pbworld.com]  
**Sent:** Monday, June 18, 2007 1:43 PM  
**To:** Ryan, James <FTA>  
**Cc:** Davidson, William A.  
**Subject:** RE: Analysis of Ala Moana On-Board Survey Records

Please use the variable otaz, dtaz, ptaz, & ataz. Nustats prepared us the o\_taz, d\_taz, but I do NOT know where they got those TAZ numbers from.

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**From:** James.Ryan@dot.gov [mailto:James.Ryan@dot.gov]  
**Sent:** Monday, June 18, 2007 5:18 AM  
**To:** Fujioka, Heather  
**Cc:** Davidson, William A.  
**Subject:** RE: Analysis of Ala Moana On-Board Survey Records

I started to look at the survey records themselves but didn't get very far. I must be doing something wrong because I sorted the records on o\_taz (the origin zone) and the lowest origin TAZ number is 218. Similarly, the lowest d\_taz is 218. The highest TAZ number in both cases is 979. I thought that the number of zones in the model set is in the 700s, so maybe there's an offset in the zone numbers?

Just to be sure that I have the entire data set, I have 14610 records.

Any help out of this quandary will be most appreciated. Thanks!

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**From:** Davidson, William A. [mailto:Davidson@pbworld.com]  
**Sent:** Monday, June 11, 2007 4:22 PM  
**To:** Ryan, James <FTA>  
**Cc:** Fujioka, Heather; Scheibe, Mark; Freedman, Joel  
**Subject:** Analysis of Ala Moana On-Board Survey Records

Attached is a memorandum prepared by Heather that summarizes our analysis of trip records to/from Ala Moana center. In summary, there does not appear to be a problem with those who transfer reporting Ala Moana as an origin or destination. A majority of those who report the center as an origin or destination do not make a transfer. The results from the 2005 survey are more comparable to the 1992 survey that I had envisioned. As always, we welcome your comments.

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William A. Davidson  
PB  
303 Second Street, Suite 700N  
San Francisco, CA 94107  
(415) 243-4601  
(925) 202-3395 (mobile)

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